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NEW EOCENE FOSSILS FROM THE SOUTHERN
GULF STATES

BY

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NEW EOCENE FOSSILS FROM THE SOUTHERN GULF STATES

BY

T. H. ALDRICH

The species described in this paper are mostly from Alabama. They present some interesting forms, and new genera from our Eocene. Nearly all of them are rare. The types are in the cabinet of the writer. I am indebted to Miss. E. G. Mitchell of Washington, D. C. for the very striking and accurate figures of nearly all the species.

DESCRIPTION OF SPECIES

Crassatellites (*Crassinella*) *aldrichianus*, Harris sp.

Plate I, fig's 1, 2

This little shell differs somewhat from the typical form. It has a less crenulated basal margin; the anterior dorsal margin is more arcuate. Associated with it is another form (see fig. 3) which may take the name of *C. clarkensis*. It has a more regular dorsal margin, is coarsely sculptured, and has no denticulation on the inner ventral margin. I am inclined to leave it as a variety however.

Woods Bluff, Ala. Also 6 miles east of Thomasville, Ala., same horizon.

Cardium (*Trachycardium*) *claibornensis*. n. sp.

Plate I, fig. 4

Shell large, covered with numerous ribs which are square in section and ornamented with close-set, triangular imbrications, all ribs being covered except in the umbonal region. The sunken spaces between the ribs are not half their width

and in the umbonal region show a series of riblets at right angles following the growth lines. Inner basal margin denticulated. The substance of the shell is thin, showing the ribs in the cavity. The hinge was unfortunately broken.

Height 35 ; breadth 33 mm.

De Soto, Miss. Claibornian.

Tellina (Angelus) prolenta, n. sp.

Plate I, fig. 5

Shell small, rather compressed, inequilateral, posterior longest, the dorsal margin descending sharply on the anterior end, shell rather pointed, while the posterior is rounded ; hinge normal ; exterior smooth, with a few faint lines of growth ; a strong depressed area anteriorly running from beak to base. Internally a slight rise drops from the beak to the ventral margin ; muscular scars just perceptible.

Length 5 ; height 2 mm.

Claiborne Sand bed, Claiborne, Ala.

The anterior depression is the most noteworthy and distinctive peculiarity.

Tellina temperata, n. sp.

Plate I, fig. 6

Shell small, oval, moderately convex, inequilateral, regularly rounded, beaks very small, surface polished and marked with concentric lines separating rather broad interspaces. Hinge normal ; right laterals rather strong. Muscular scars distinct but shallow ; pallial sinus partially confluent.

Length 11 ; height 6 mm.

Gregg's Landing, Alabama River, Ala.

This species resembles *T. subtriangularis*, nob., somewhat but is more regularly rounded, lacks the posterior fold and the raised lines thereon.

Ervilia meyeri, n. sp.

Plate I, fig. 7

Shell small, nearly equilateral, surface covered with numerous close-set raised lines becoming somewhat coarser near the ventral edge. Beak low but pointed. Interior polished. Posterior muscular scar well defined, the anterior very faint. Cardinals rather strong; laterals doubled in the left valve.

Length 4; height 2.5 mm.

Claiborne Sand bed, Tombigbee River, Ala.

Named in honor of Dr. Otto Meyer, one of our early workers in the Eocene.

Akera texana, n. sp.

Plate II, fig. 1

Shell medium, substance extremely thin, surface smooth except some wrinkles where the body whorl meets the sunken spiral area. Strongly depressed; whorls about five, very sharply defined at the apical end with a slightly reflected edge. Umbilical part bordered by a reflected edge.

Length 13; breadth 10 mm.

Lower Claiborne Eocene of Smithville, Tex.

This is a new genus to our Eocene and rare no doubt on account of its very fragile shell. Several examples were obtained but all went to pieces on drying.

Scobinella newtonensis, n. sp.

Plate II, fig. 2

Shell rather solid, medium size; whorls nine or ten; apex slightly bent, embryonic whorls four in number in perfect specimens; a raised line starting just below the suture on the next whorl, which becomes more prominent on the latter whorls, or roughly tuberculated; the median part of

the whorl starting with a row of spiral and strongly marked tubercles which gradually double and are somewhat inclined to the vertical axis; just above this double series another appears with tubercles twice as long spirally as high; the fascicular surface very concave, marked by three or four broad but dim spiral lines; fasciole nearly semicircular; body whorl ornamented with numerous coarse tubercles set in spirals also inclined to the axis; outer lip striated within; columella nearly straight, slightly bent to the left at base; callos thin, showing several spirals passing into the interior, one on the central part almost might be called a plait.

Length 12; breadth of body-whorl 6 mm.

Newton, Miss. Lower Claiborne horizon.

Pleurotoma (Bathytoma) marieana, n. sp.

Plate II, fig's. 3, and Plate III, fig. 1

Shell small, whorls six, the first smooth, the next with spiral lines and a few faint axial ones; body-whorl profusely ornamented, cancellated, the periphery of this whorl carrying three close-set spirals which give the appearance of a raised, beaded line; the space between the periphery and the suture strongly concave and carrying the retral sinus; suture distinct.

Woods Bluff horizon, six miles east of Thomasville, Ala.

This little species is represented by two specimens both of them young. The figures do not show the periphery of the body-whorl correctly.

Scobinella sculpturata, n. sp.

Plate II, fig's 4, 5

Shell rather small, solid; whorls eight, ornamented with close-set ribs oblique to the vertical axis; suture bordered above by a strong nodulous spiral; body-whorl marked by numerous spiral lines, which cut into the ribs much the same as in *Scobinella elaborata*, Con. Sinus semicircular, car-

ried on a concave plate or shoulder. Aperture smooth within.
Length 2 ; breadth of body-whorl 3 mm.
Hatchetigbee Bluff, Tombigbee River, Ala.

Bittium (Stylidium) anita, n. sp.

Plate II, fig. 6

Shell small, rather solid ; whorls seven to eight ; apex pointed, embryonic whorls smooth, the balance with six or more spiral impressed lines ; suture distinct, whorls slightly shouldered ; aperture ovate spirally striate within ; columella somewhat bent and reflected below ; canal slightly twisted.

Length of largest specimen 5.5 ; breadth 2 mm.

Six miles east of Thomasville, Ala. Woods Bluff horizon.

Thais clarkensis n. sp.

Plate III, fig. 2

Shell small, whorls six, the first three and a half smooth, embryonic, the others marked by slight folds axially raised ; shell somewhat shouldered at the suture ; body-whorl expanding rapidly ; outer lip bordered by a raised and reflected process, flattened somewhat within and carrying a few raised but very small tubercles on the inner part of their edge ; columella slightly concave with a constriction at the beginning of the canal which is short, rather deep and bent to the left ; callus rather strong, broken at base, exposing a slight umbilicus, but probably in perfect specimens the umbilicus is covered. A few faint spiral spaces appear on the body-whorl and the next younger.

Height 9 ; breadth of body-whorl 7 mm.

Woods Bluff horizon six miles east of Thomasville, Ala.

Turbonilla (Mormula) mitchelliana, n. sp.

Plate III, fig. 3

Shell medium ; spire smooth, embryonic whorls bent to one side and partially immersed ; whorls nine, surface smooth, shell shouldered at suture and compressed below same. Inner lip reflected and bearing one fold ; outer lip sharp, striated within. The body-whorl is large ; looking down on the shell from the apex the suture seems to cut under the whorls.

Height 7.5 ; maximum diameter of body-whorl 2.5 mm.

Six miles east of Thomasville, Ala. Woods Bluff beds.

This species is about the size and shape as *Turbonilla anita* Aldr. but has no spiral lines, also carries a prominent fold on the columella. Dr. P. Bartsch has kindly determined its generic position.

Eulima extremis, n. sp.

Plate III, fig. 4

Shell polished ; whorls nine or ten ; suture very shallow showing indistinctly ; aperture elongate ; outer lip slightly sinuous ; inner lip reflected over the lower part of the pillar.

Length of longest specimen 7 mm.

Claiborne Sand bed on Tombigbee River about one mile above St. Stephens, Ala. Also at Claiborne.

This species is longer than *E. aciculata* Lea, and more slender, that species averaging about eight whorls, while this has nine to ten. All specimens of this species show a broad constriction below the suture, and even retain some traces of a color band there. The suture in Lea's species is plainly marked. *Eulima lugubris* Lea has a more circular aperture, a more thickened and reflected columellar callus and is broader.

Cerithiopsis greggiensis n. sp.

Plate III, fig. 5

Shell small ; whorls rather rapidly expanding ; ornamented with three rows of tubercles which do not coalesce either spirally or axially as in some specimens of the genus ; entire surface covered with fine, close-set, spiral lines ; suture deep ; base with spiral lines, some coarser than others ; columella smooth ; spiral lines superimposed upon the other ornamentation ; row of tubercles just below and bounding the suture composed of smaller and more closely set ones than in the other two rows. The specimen is fragmentary.

Breadth of body-whorl 3 mm.

Gregg's Landing, Alabama River, Ala.

Retusa claibornensis, n. sp.

Plate II, fig. 7

Shell small, showing lines of growth, not polished ; without revolving striæ ; spire sunken ; edge of the pit rounded over, aperture longer than the body of the shell, narrow above, widening below ; outer lip sharp, simple, straight, rounded below, pillar twisted, ridged and somewhat reflected.

Length 2.5 mm.

Claiborne, Ala.; in the sand bed.

Odostomia (Pyrgulina) claibornensis, n. sp.

Plate IV, fig. 1

Shell elongate-ovate ; nuclear whorls obliquely immersed in the first of the post-nuclear turns ; post-nuclear whorls well rounded, narrowly shouldered at the summit, marked by feeble, slightly protractive, axial ribs which are best developed near the summit and gradually decrease in size as they approach the suture ; of these ribs 20 occur on the first and second, and 26 upon the penultimate turn. In addition to the axial

ribs the whorls are marked by subequal and subequally spaced, incised, spiral lines, of which 12 occur between the first and second, and 17 upon the penultimate turn; suture moderately constricted; periphery and the rather long base of the last whorl well rounded, marked by the feeble extension of the axial ribs and about 18 incised, spiral lines which equal those of the spire. Aperture elongate-ovate; posterior angle acute; outer lip rather thick; columella short, curved and reflected over the reinforcing base, anterior edge only being free; parietal wall covered with a thin callus.

Claiborne Sand bed; Claiborne, Ala.

The fold is faintly perceptible from the outside. Very rare. Height 3.5 mm. This shell has a strong resemblance to *Melania claibornensis* Heilprin. That species is represented with seven whorls and is more pointed, narrower, with a much smaller aperture, judging from the figure of the type with which I have compared this form.

Turbonilla (Pyrgiscus) agrestis, n. sp.

Plate IV, fig. 2

Shell small, only 5 whorls represented in type; surface with four raised revolving lines, increasing to five on the body-whorl, with the same number upon the base. There are numerous raised axial ribs across which the spirals pass. Umbilicus closed; aperture ovate; columella somewhat twisted.

Width of broken specimen, 1 mm.

Hatchetigbee Bluff, Tombigbee River, Ala.

A strongly marked species; quite distinct.

Levifusus trabeatus Con., var.

Plate V, fig. 3

This is another variation possessing a revolving row of incipient spines at the periphery with another finer line below. It is much more like *Fulgur* in shape and is evidently a connecting link. The outer lip is lirate within.

A variety of *Levifusus supraplanus* Harris is also figured, Plate IV, fig. 4, which rather connects the form with *Fusus* (*Levifusus*) *suteri nobis*, seems to be distinct from other forms, yet these species vary so a lot may go into one basket eventually.

Levifusus pagoda, Heilpr., var.

Plate IV, fig's 5, 6

Differs from all other forms described by its possessing two raised, revolving lines, slightly tubercular. Specimen figured is from Woods Bluff, Ala. It also occurs at Matthew's Landing, Ala., in the Midway horizon. The variation in this and other species of *Levifusus* are greater than generally recognized. One form in my collection of this species has two rows of tubercles at the periphery of the body-whorl both equally prominent, still another form has the single row at the periphery followed below by five or more pairs of raised lines running in couples. This form occurs at Yellow Bluff, Alabama River, Ala.

Plate IV, fig. 7 is another form that may equal *Levifusus indentus* Harris, I have no doubt several of these so-called species will be united upon future study.

LYRISCHAPA, nov. gen.

Shell medium; apex bulbous, the initial point below the tip and buried in the same. Three other whorls, flattened above, ribs becoming spinose above; revolving lines numerous. Inner lip lirate. Type described below.

Lyrischapa harrisi, nov. sp.

Plate IV, fig. 8

Shell medium; Scaphelloid in appearance; surface carrying eleven strong, elevated ribs which become spinous at the shoulder; surface also ornamented with numerous close-set revolving lines, coarser near the base; the entire inner lip with liræ.

Length 18; width at shoulder 10 mm.

Three and one-half miles south of Quitman, Miss.

Lower Claiborne Eocene.

This shell is probably the same as figured and mentioned by Dr. Dall (*Trans. Wagner Free Inst. Sci.*, vol. 3, p. 77, pl. 6, fig. 5a). It is not a *Volutilithes*, not a *Caricella* or *Lyria*, but has some common characters of all.

Sigaretus (Sigaticus) clarkensis Aldr.

Plate V, fig. 1

A specimen is herewith figured that is more characteristic than the type. All these forms including several called *Eunaticina* by Dr. Dall should be removed from *Sigaretus* etc., as they are Naticoid as first observed by Professor Harris.

Discohelix texana, n. sp.

Plate V, fig's 2, 3

Shell small, whorls five, nucleus smooth, showing the same as in *Solarium*; the whorls following gradually developing three rows of tubercles, those on the periphery doubled; upper surface flat, the space between the two keels somewhat concave and smooth. the under part excavated somewhat and marked with larger tubercles on the periphery besides a central row, smaller and more rounded. These tubercles on the base rapidly grow smaller and disappear before reaching the umbilical area.

Length and breadth about 3 mm.

Smithville, Tex. Lower Claiborne Eocene.

Chlorostoma nautiloides, n. sp.

Plate V, fig's 4, 5, 6

Shell small, whorls five, flattened above, rounded below; surface covered with fine revolving lines which are coarser on the base; umbilicus open, deep, with a revolving line proceeding from the lower part of the aperture and revolving into the

umbilicus. Interior nacreous.

Height, 1.5 ; greatest diameter, 5 mm.

Claiborne Sand, Claiborne, Ala.

This little species may equal one of the species described by DeGregorio, but all his species appear to be smooth.

Neritina unidentata, n. sp.

Plate V, fig. 7, 8

Shell smooth, rather small, showing the epidermis and a few lines of growth underneath. The spire is worn off. Shell rather quadrate: outer lip sharp, inner lip flattened, callus reflected, pillar bearing one large tooth curving downwards into the interior. The color markings are retained, composed of close-set, dark brown broken lines, the entire surface being covered.

Height 7 ; maximum diameter 8 mm,

Woods Bluff horizon, six miles east of Thomasville, Ala.

This is the first undoubted Eocene *Neritina* from Alabama, and is interesting because there is a living form in the Coosa and Cahaba rivers of Alabama.

Neritina pupa Lin. from Cuba has also a faint fold inside the pillar lip, which rapidly disappears, probably absorbed. *Neritina showalteri* Lea has no dentition on the pillar.

Argyrotheca dalli n. sp.

Plate V, fig's 9, 10

Shell quite small ; dorsal valve oval, exterior with about fourteen folds radiating from the beak. Surface covered with fine lines, and also finely perforated ; within also finely perforated but the perforations do not seem to extend through the shell. Median septum strong, elevated, reaching nearly to the base.

Height 4 ; width 4.5 mm.

Hatchetigbee Bluff, Tombogbee River, Ala.

Dorsal valve only known. This genus is new to our Eocene.

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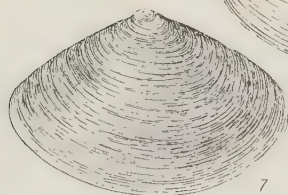
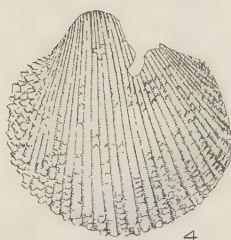
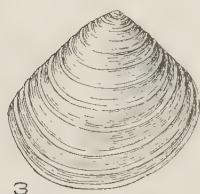
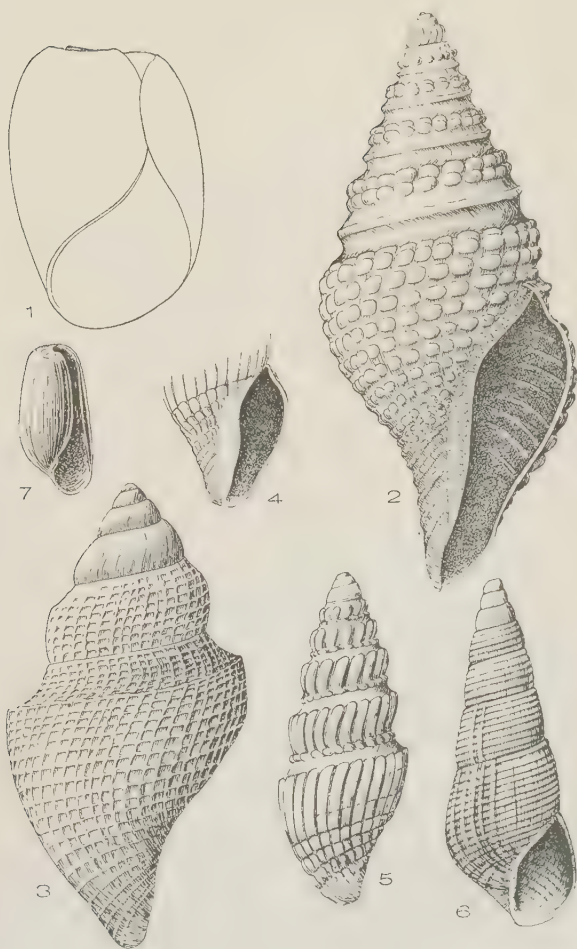


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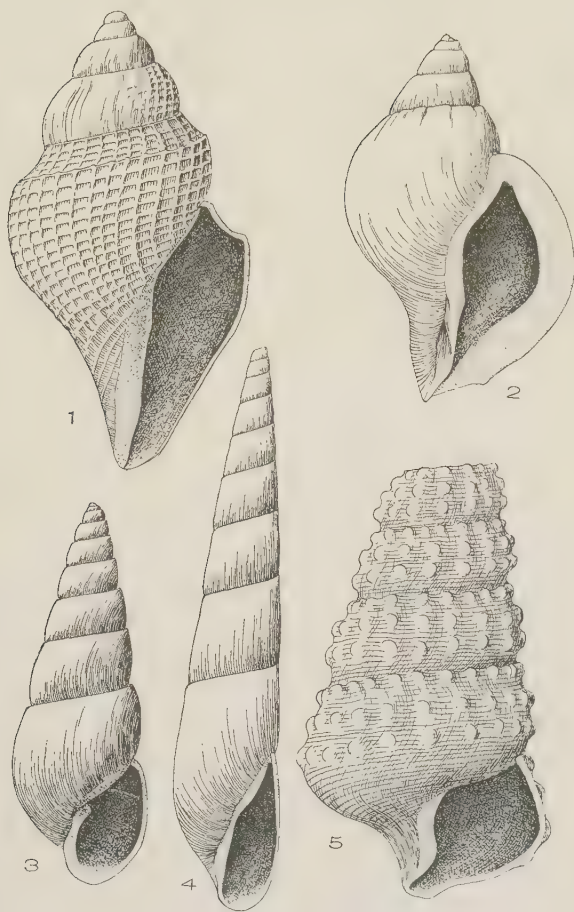


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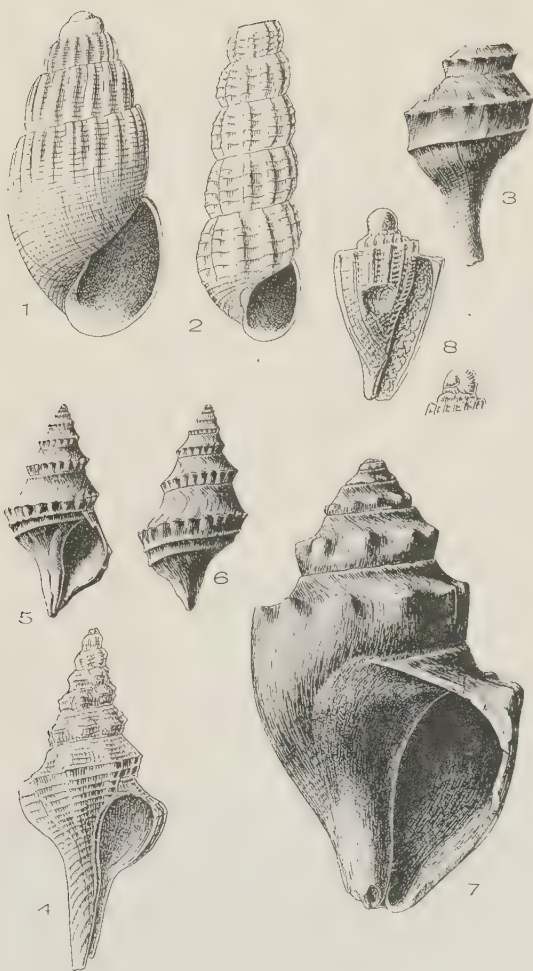


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